Technology Opportunity

Imaging Technology

We human beings are visually oriented. Most of the information we obtain comes through our sense of sight. Unfortunately our eyes are not adapted to perceive all that happens around us. Some events occur too rapidly or slowly for us to adequately comprehend. Other phenomena can be perceived only in wavelengths outside our visible spectrum, or they may occur in environments too hostile for us to tolerate.

New imaging technologies, developed in support of ground, air, and space research programs at Glenn Research Center, have been employed to address the challenge of understanding our physical world. NASA Glenn seeks to transfer expertise in image formation, image capture, manipulation, data reduction and presentation of research images and results.

Potential Commercial Uses

Imaging to record
- High-speed events
- Fluid physics studies
- Rotating machinery studies
- Gas flow studies utilizing schlieren imaging
- Manufacturing process control
- Environmental imaging
- Distribution studies
- Ultraviolet or infrared wavelength imaging
- Nondestructive testing
- Materials stress analysis
- Component failure analysis

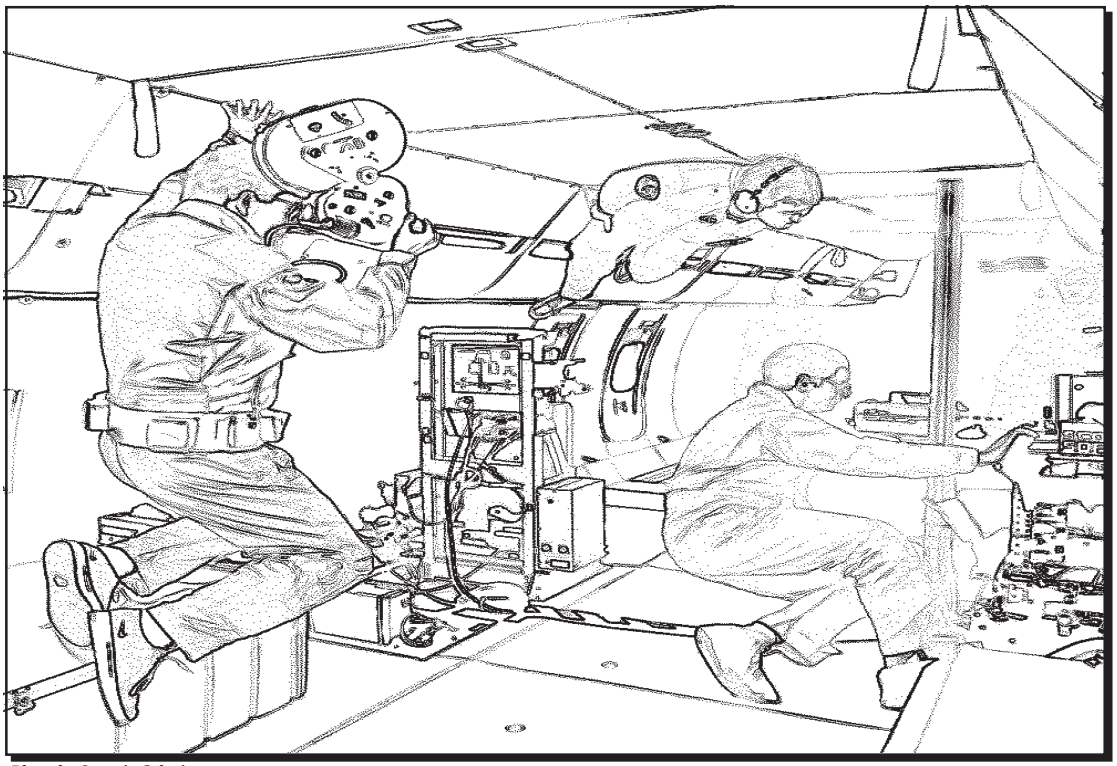

Photo by Quentin Schwinn

Scientific imaging in support of research activities conducted on the DC–9 microgravity research aircraft.

National Aeronautics and Space Administration
Glenn Research Center

Commercial Technology Office

Benefits

- Rapid and relatively inexpensive
- Noninvasive, nondestructive process evaluation
- Remote imaging in hostile environments
- Accurate—digital imaging for computer analysis and data reduction
- Comprehensive—holistic approach to data imaging, from imaging system design through data analysis and presentation

The Technology

To slow it down, to speed it up, to magnify it beyond imagination, to make it visible to the human eye, the NASA Glenn Imaging Technology Center, in one-of-a-kind facilities, develops imaging systems and processes with an expertise uncommon to the conventional photographic arena.

High-speed motion picture, high-speed video, multispectral imaging, digital imaging, and still imaging technologies can be custom-engineered into an acquisition system that captures visual data to meet your project objectives.

Video, motion picture, and still image data can be manipulated, reduced, and analyzed, or prepared for your analysis.

Imagery and related data can be coupled with animation sequences and video production to produce a concise presentation of your data. Output is available in a variety of film and video formats, multimedia presentations and digital formats such as CD-ROM, and Photo-CD.

Options for Commercialization

Seeking partnership with industry for commercial applications

Contact

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Key Words

Digital imaging
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Data manipulation
Data reduction
Photography

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